FINDING OF EMERGENCY

The Secretary of the Department of Food and Agriculture finds that an emergency exists, and that the foregoing adoption of a regulation is necessary for an immediate action to avoid serious harm to the public peace, health, safety or general welfare, within the meaning of Government Code Section 11342.545 and Public Resources Code Section 21080. The Secretary has also determined that this emergency clearly poses such an immediate, serious harm that its delaying action by providing five working days advance notice to allow public comment would be inconsistent with the public interest, within the meaning of Government Code Section 11346.1(a)(3). Further, the Secretary has determined that this emergency clearly poses such an immediate, serious harm that delaying action by the Office of Administrative Law providing five working days advance notice to allow public comment would also be inconsistent with the public interest, within the meaning of Government Code Section 11349.6(b).

Description of Specific Facts Which Constitute the Emergency

On July 24, 2008 (California Pest and Damage Record #1322501), *Thaumatotibia leucotreta,* false codling moth (FCM), was detected in a trap in Port Hueneme for the first time in the United States. This FCM was trapped under the terms of a Cooperative Agricultural Pest Survey (CAPS) contract entered into between the Department and the United States Department of Agriculture (2008 Final Work Plan Pest Detection - False Codling Moth Survey California Department of Food and Agriculture Agreement # 08-8523-1137-CA). The purpose of the survey was to detect the presence of FCM in California before the insect could become permanently established. Early detection of this insect is critical to the ability to eradicate incipient infestations and the Department lacked adequate funding to perform a survey on its own. The funding for this survey under CAPS increased the likelihood that this insect would be found at incipient levels that allow for successful eradication.

The false codling moth is one of the most important pests of citrus and cotton in subsaharan Africa. The larvae of this moth infest a wide variety of fruits, vegetables, and forest trees, but cause the most damage to citrus and cotton.

This insect would cause devastating losses to the agricultural industry and to urban landscapes if it were to become established in California. The annual combined gross value of the top ten agricultural commodities in California which would be directly impacted by this pest is over $7.1 billion, which amounts to 22% of the total agricultural value for the State (California Agricultural Resources Directory, 2007).

California is the number one economic citrus state in the nation, with the USDA putting the value of California citrus at $1,131,851,000 (Federal Register Vol. 71No.83; published May 1, 2006; pg 25487). A 2002 report by the Arizona State University School of Business indicates that there is at least $825.6 million of direct economic output and another $1.6 billion when all upstream suppliers and downstream retailers are included. This represents over 25,000 direct and indirect employees. To protect this source of revenue, California must do everything possible to exclude serious pests of citrus, such as FCM. Additionally, citrus is widely planted at residences throughout the State and provides a food source directly to those residences and in some cases, neighborhoods.

The total value of California's 2007 Cotton crop was approximately $698.5 million.

FCM is currently not established in the United States. However, FCM was detected in 2002 and 2005 as live larvae entering California via citrus imported from South Africa. The current FCM survey has been conducted on a statewide basis with the voluntary cooperation of property owners. Trece IIC pheromone traps baited with a pheromone for adult FCM are in use. The current FCM survey areas are concentrated primarily in areas of California where the major hosts are known to occur in the most abundance and in areas identified as of high risk for introductions. These areas are both rural agricultural

production land and urban residential properties. Approximately 1000 traps have been deployed. Trap deployment/replacement/rotation is May through October. Each trap is placed in host plants, preferentially citrus. The trap is inspected every two weeks, the trap replaced monthly, the trap relocated to a different site within that square mile every six weeks, and the lure replaced every other month.

FCM eggs are translucent white, flattened, oval, ridged and flanged with a diameter of 0.9 mm. Females deposit 100–400 eggs, usually laid singly, on fruits or cotton bolls of the respective crops. In contrast, eggs may be laid in groups on the surface of citrus fruits. The eggs generally hatch after about a week and the creamy-white larvae (with brown heads) often feed on the rest of the eggs (whether hatched or not) or even on other larvae. The larva then burrows into the citrus fruit and feeds on the inner rind and pulp but not on the juicy pulp. There is often a distinct sunken brown patch in the skin marking the entry point of the larva but this is not always obvious. Dark frass may also been seen at the point of entry. Secondary fungal and bacterial rots may cause additional damage to infested fruit. The fully mature larvae are pinkish or orange red in color. The larval activity causes premature ripening of the citrus fruit and it may fall. Larvae leave the fruit to pupate in silken cocoons decorated with soil and leaf fragments, on the surface of the soil, or in cracks in the ground. The pupal stage varies with temperature, ranging from 8–12 days in Kenya. Adults are about 17 mm with dark greyish brown forewings, patterned with reddish brown and black; the hind wings are dark greyish brown.

Adults are nocturnal. This species is uncommon in areas with a long dry season; possibly due to the fact this species has no diapause stage. This species must breed continuously to survive, and in areas with long dry periods, irrigated crops such as citrus provide a breeding area. The development time for each life stage varies considerably with temperature, and up to five generations can be completed under laboratory conditions. With less optimal food, such as natural conditions, fewer generations might develop.

In South Africa, egg populations are low during winter, apparently owing to lethal midwinter temperatures. Only dead eggs were recorded during the coldest months of June–August. Larval counts revealed that means of 3.8 and 7.5% of the fruits were infested during the winter. The first eggs appeared on the new crop in early November and a peak in the egg population of 0.6 live eggs/fruit was reached in February. About one-third of the fruits were infested with live eggs at this time. Populations then declined steadily until no live eggs were recorded at the end of April. Low larval populations in the fruits indicated high mortality of first-instar larvae during the season. Small numbers of fruit that dropped in early December were infested with larvae. A *Trichogrammatoidea* egg parasite was active in most groves, and at times up to 92% of the eggs were parasitised in the summer. A host-parasite lag of eight weeks developed, the first parasites being recorded in January. Activity increased rapidly thereafter, and from early February onwards parasites attacked about three-quarters of the host eggs. During this period, the moth population declined steadily.

On cotton in the Ivory Coast, the eggs are laid either on the leaves or on the bolls, where they are protected by the bracts from the effects of insecticide sprays and the emergent larvae feed on large, but not mature, bolls. Young larvae feed inside the wall of the cotton boll. As the larvae mature, they move to the cavity of the boll to feed on the seeds and lint. In more humid climates, secondary fungal and bacterial rots may cause additional damage to infested bolls. Adult emergence peaks occurred in September and December. Adults live for about 8 days and each female produces 150–200 eggs. After 14–20 days the larvae pupate in soil, and the pupal stage lasts for about 10 days.

A study conducted in Uganda showed that cotton, corn and sorghum were important FCM food-plants, and that populations of larvae were bimodal, with peaks on cotton in January and corn in July.

On peach in South Africa, both egg numbers and the degree of infestation increased from

low in spring when the first peach cultivars matured, to high in mid-summer when the last peaches were harvested. Summer temperature stimulated the development and fertility of the moth, while winter temperatures delayed its development, reduced its fertility, and together with low humidity, increased egg mortality. Peaches were susceptible to attack from about six weeks before harvest.

FCM is a serious pest of citrus in Southern Africa and of cotton in many parts of Africa. It also affects corn in West Africa. In South Africa, citrus crop losses of 10–20% are common and losses of between 42 and 90% in late crops of cotton in Uganda. It has also become a significant pest of macadamia in Israel and causes losses of up to 28% in a late peach crop in South Africa.

The control of this pest is difficult due to the wide host range and potential for reinfestation. Parasitoids have been identified but are unlikely to be a stand alone cost effective control strategy. Insecticides and chitin inhibitors may be effective for some crops and pheromones have been identified for mating disruption of this species. The use of area wide eradication/suppression efforts using the “sterile insect technique (SIT)” has also been considered.

As a result of the detection of a FCM in Port Hueneme, delimitation traps are currently being deployed. The delimitation trapping density is currently at 100 traps in the core square mile surrounding the find and 25 traps in each square mile of the first mile buffer, thereby trapping a 9 square mile grid. However, there is a need to increase the first buffer to 50 traps per square mile, and add a second mile buffer of 25 traps per square mile, thereby trapping a 25 square mile grid.

The FCM has the capability of causing significant irreparable harm to California’s agricultural industry and the environment. While the Department’s compliance with the California Administrative Procedure Act and the California Environmental Quality Act

(CEQA) are separate actions, they can be interrelated. Although adoption of specific regulatory authority can be the beginning of a project and therefore covered by CEQA, this regulation, for the reasons already set forth, constitutes a specific act necessary to prevent or mitigate an emergency as authorized by Public Resources Code Section 21080, subdivision (b) (4) and Title 14, California Code of Regulations Section 15269, subdivision (c). The regulation is also an action required for the preservation of the environment and natural resources as authorized by Title 14, California Code of Regulations, sections 15307 and 15308.

What eradication options the Department intends to implement would be dependent upon the size of the infestation, its location(s) and which materials may be registered for use and has adequate efficacy data. Minimally, the searching for all life stages as authorized by the regulation needs to continue throughout California as unknown introduction pathways exist.

Additionally, prior to the implementation of any eradication activities, the Department must also comply with any requirements contained in the California Environmental Quality Act.

The Department has also determined that to ensure it conducts any eradication project with the greatest chances of success, some eradication activities authorized by this regulation need to begin as soon as possible. This authority includes, establishing the legal authority for, “The searching for all stages of the FCM by visual inspection, the use of traps, or any other means.” Due to the new immediate threat posed by the known FCM detection in Port Hueneme, Ventura County, the Department needs to immediately establish it has the legal authority to conduct FCM surveys without its having to just rely on property owners voluntarily granting access in order to complete the surveys. Additionally, if the survey data is negative, it would be extremely beneficial because it supports the validity of the U.S. still being free from FCM and promoting California’s export program.

The effect of the adoption of this regulation will be to implement the State’s authority to

search for all stages of the FCM by visual inspection, the use of traps, or any other means. The effect of the adoption of this regulation will also be to establish the hosts and possible carriers and the means and methods to perform suppression, control and eradication activities against FCM throughout California. Any eradication or control or suppression actions undertaken by the Department will be in cooperation and coordination with federal, city, county and other state agencies as deemed necessary by the Department to ensure no long-term significant public health or environmental impacts and adhere to the Department's obligations under CEQA. To detect FCM and prevent its spread to non-infested areas, and to protect California's agricultural industry and environment, it is necessary to search for all life stages of FCM immediately in Ventura County. Therefore, it is necessary to adopt this regulation as an emergency action. Additionally, as there is an unknown introduction pathway into the State, it is now necessary to have the legal authority for searching for FCM elsewhere within the State. Therefore, the entire State is being proposed as an eradication area.

Authority and Reference Citations
Authority: Sections 407 and 5322, Food and Agricultural Code.
Reference: Sections 407, 5322, 5761, 5762 and 5763, Food and Agricultural Code.

Informative Digest
Existing law provides that the Secretary is obligated to investigate the existence of any pest that is not generally distributed within this state and determine the probability of its spread, and the feasibility of its control or eradication (FAC Section 5321).

Existing law also provides that the Secretary may establish, maintain and enforce quarantine, eradication and other such regulations as he deems necessary to protect the agricultural industry from the introduction and spread of pests (Food and Agricultural Code, Sections 401, 403, 407 and 5322). Existing law also provides that eradication regulations may proclaim any portion of the State as an eradication area and set forth the boundaries,

the pest, its hosts and the methods to be used to eradicate said pest (Food and Agricultural Code Section 5761).

Section 3591.22. False Codling Moth Eradication Area.

The adoption of Section 3591.22 will establish that the entire State of California is an eradication area with respect to FCM. The proposed adoption of the regulation will also establish the possible carriers and the means and methods that may be used to eradicate, control or suppress FCM within any specific eradication area(s). The effect of the adoption of this regulation is to provide authority for the State to perform eradication activities against FCM within the entire State of California.

Mandate on Local Agencies or School Districts

The Department of Food and Agriculture has determined that the proposed adoption of Section 3591.21 does not impose a mandate on local agencies or school districts and no reimbursement is required under Section 17561 of the Government Code.

Cost Estimate

The Department has also determined that the regulation will involve no additional costs or savings to any state agency because initial funds for state costs are already appropriated, no nondiscretionary costs or savings to local agencies or school districts, no reimbursable savings to local agencies or costs or savings to school districts under Section 17561 of the Government Code and no costs or savings in federal funding to the State.